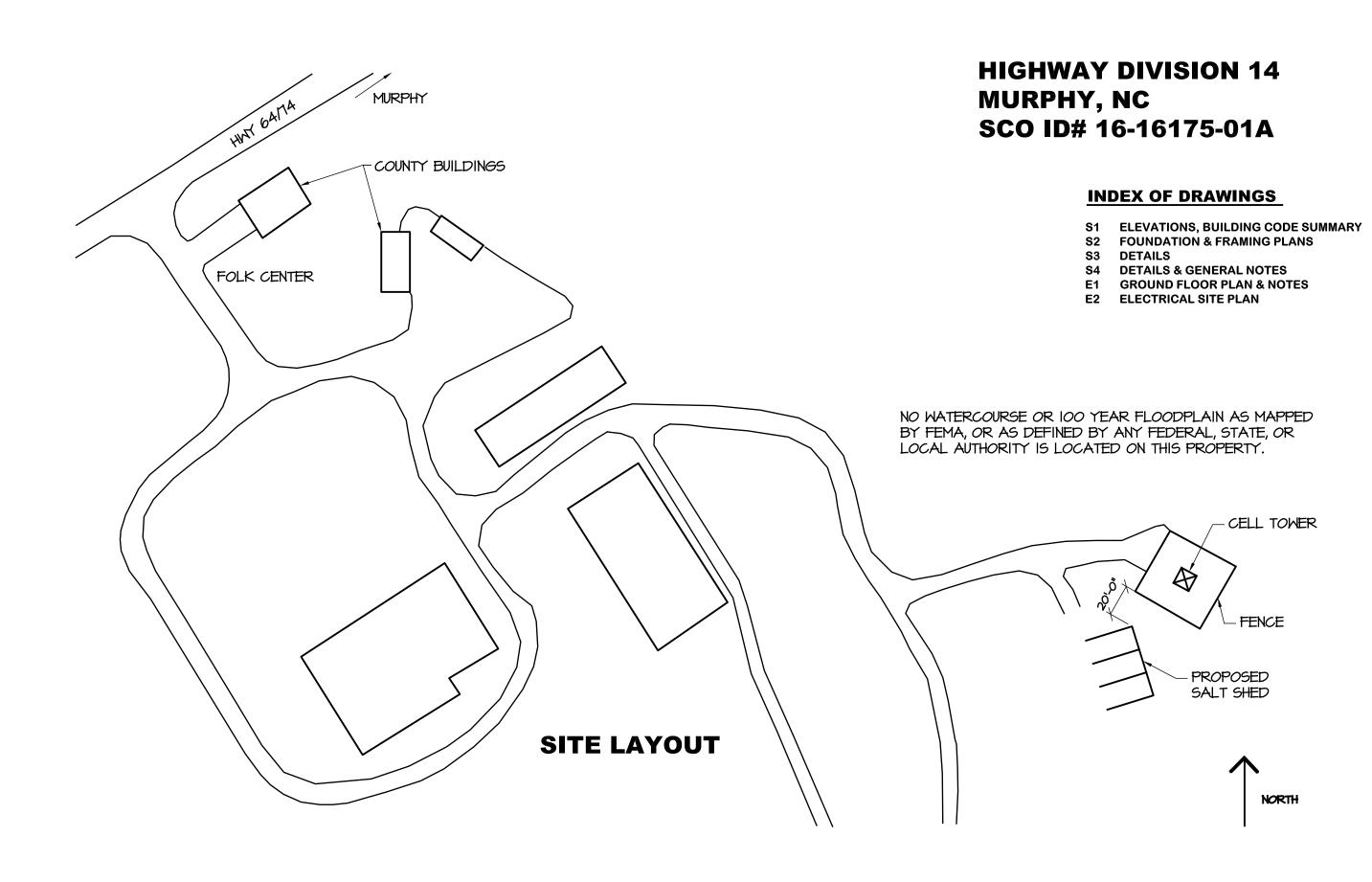
DATE ISSUED: 07-13-18 DRAWN BY: MDM CHECKED BY: MDM SHEET NO.

> **S1** 1 *of* **4**

THREE-BAY SALT STORAGE SHED **CHEROKEE COUNTY**



ALLOWABLE HEIGHT

FIRE PROTECTION REQUIREMENTS

LIFE SAFETY SYSTEM REQUIREMENTS

⊠ No □Yes

No
 □Yes

No □Yes

EXIT REQUIREMENTS N/A

STRUCTURAL DESIGN

Exposure Category _____B Partially Enclosed

Spectral Response Acceleration Ss 44.3 %g S₁ 11.1 %g

X Bearing Wall _____Dual w/Special Moment Frame

_____Building Frame _____Dual w/Intermediate R/C or Special Steel

Wind Base Shears (for MWFRS) Vx =_____ Vy = ___

Building Height in Stories Stories 2 Stories+1= N/A Stories 2

REQ'D PROVIDED W/ REDUCT

Emergency Lighting:

Smoke Detection Systems: ☐ No ☐ Yes

Snow (I_S) _____1.0

Occupancy Category:

Basic structural system (check one)

Architectural, Mechanical, Components anchored? N/A

SOIL BEARING CAPACITIES:

ELECTRICAL - SEE SHEET E1

LATERAL DESIGN CONTROL: Earthquake _____ Wind ____X

PLUMBING, ENERGY. & MECHANICAL SUMMARIES - NOT APPLICABLE

Site Classification _____ D ___ Field Test | X| Presumptive

_____Moment Frame _____Inverted Pendulum

Analysis Procedure _____Simplified ___X Equivalent Lateral Force

Building height in feet Feet 40

* Indicate section number permitting reduction

 Interior Walls and partitions
 0
 0

 Roof construction
 10
 0
 0

Panic Hardware:

Structural frame, including columns, girders, & trusses

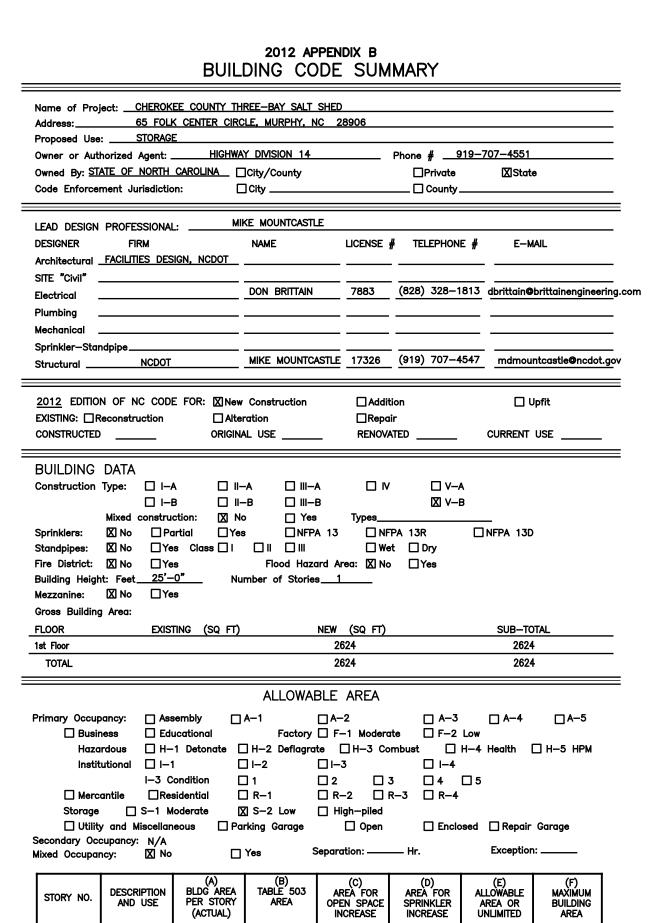
Roof construction

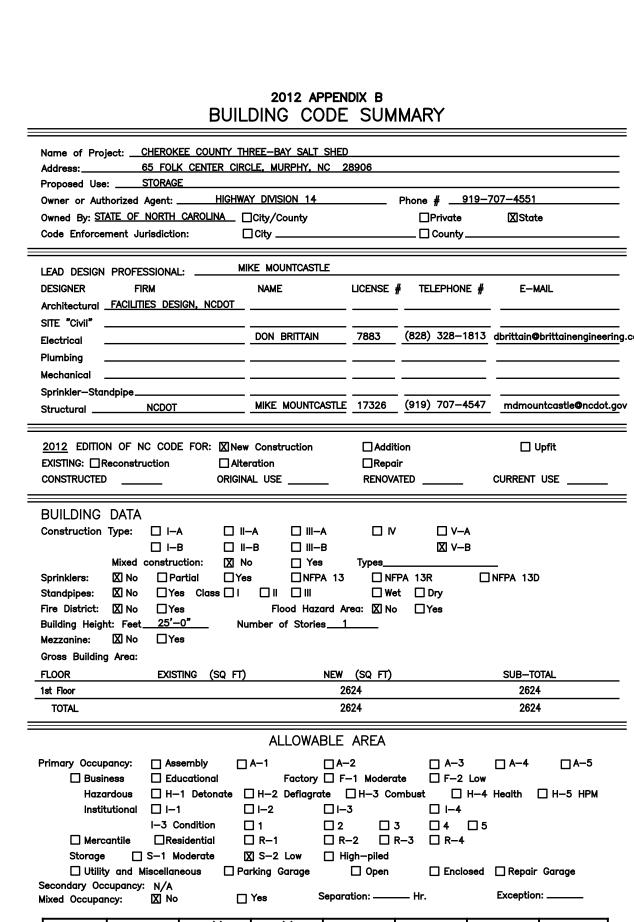
__ Feet=H+20'= ___N/A

INCREASE FOR SPRINKLERS SHOWN ON PLANS

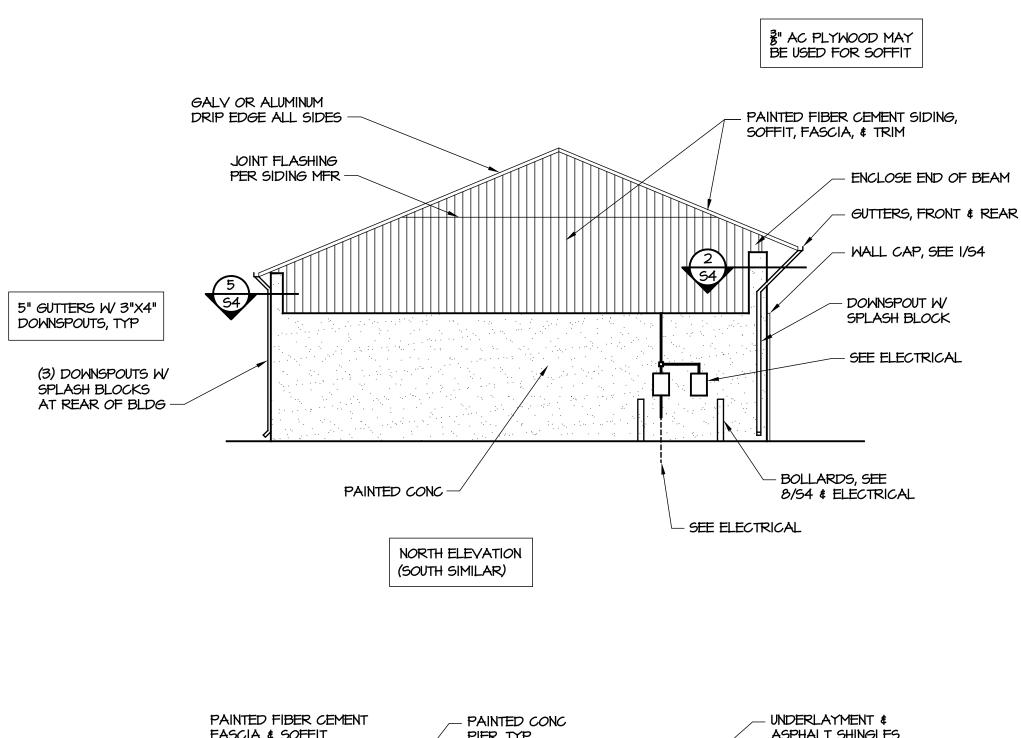
DETAIL & DESIGN # FOR RATED RATED ASSEMBLY PENETRATION

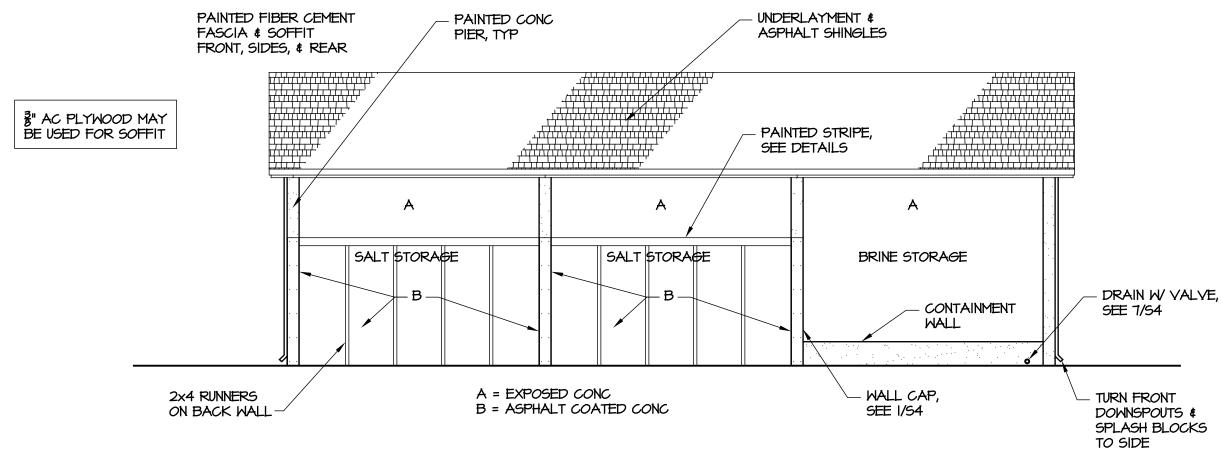
Mezzanine N/A psf





Utility & Misc. 2624 13,500 NOT USED NOT USED





WEST ELEVATION (EAST SIMILAR)



ASSET NUMBER: CO.# SITE.# BLDG.# 00 - 00 - 00 REVISIONS NO. DATE

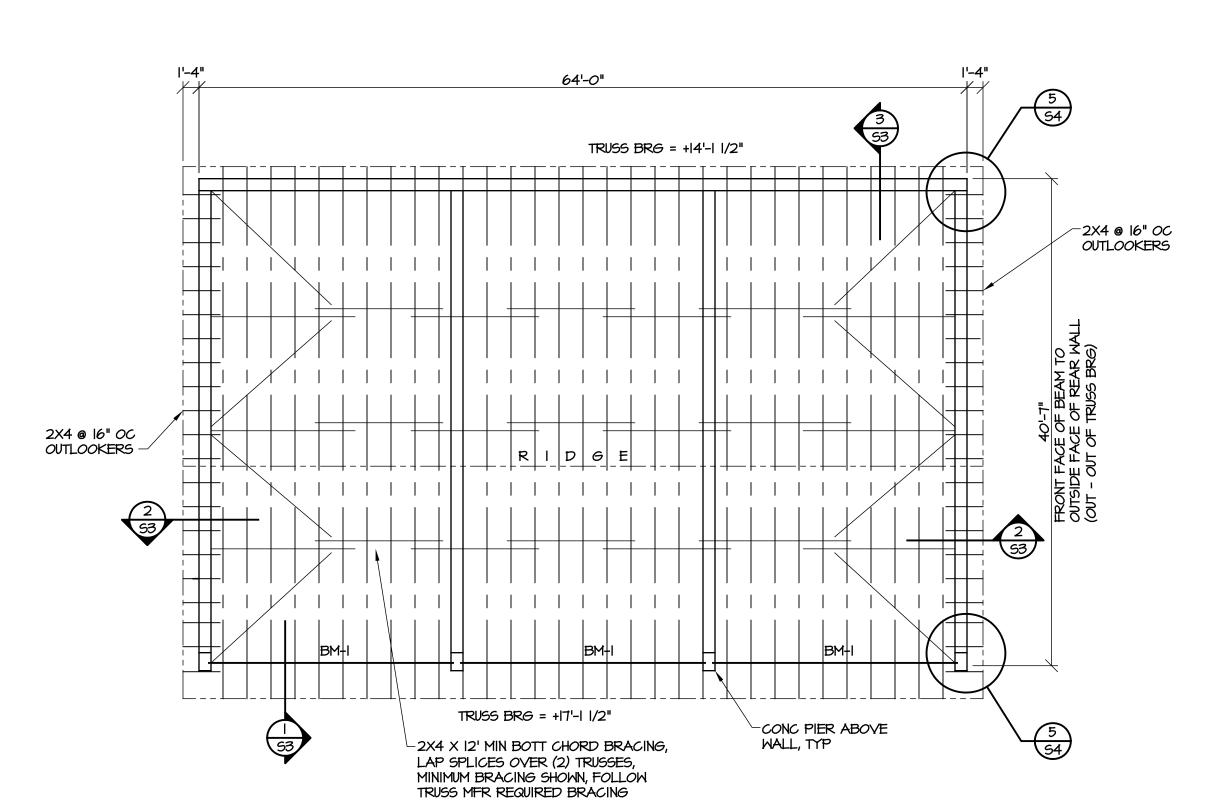
DATE ISSUED: 07-13-18
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CHECKED BY: MDM

SHEET NO.

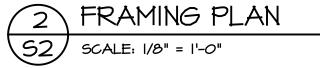
NOTES:

- I. PROVIDE TRUSS SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NC, SHOWING TRUSS LAYOUT, TRUSS DESIGNS, \$ REQUIRED BRACING. THIS BUILDING IS PARTIALLY ENCLOSED.
- 2. TRUSS MFR NOTE THERE IS NO CEILING & BOTTOM CHORD BRACING MAY BE REQUIRED. GC NOTE BOTTOM CHORD BRACING IS SHOWN ON TRUSS CALCULATION SHEET & IS IN ADDITION TO THE TEMPORARY BRACING.
- 3. WALL SHEATHING SHALL BE 1 APA RATED SHEATHING, 32/16 SPAN RATING, EXPOSURE I, ATTACHED W/ 8D NAILS @ 6" OC ON PANEL EDGES & 8" OC ALONG INTERMEDIATE SUPPORTS, UON. PROVIDE BLOCKING AT ALL PANEL EDGES ON EXTERIOR WALLS.
- 4. ROOF SHEATHING SHALL BE \$" APA RATED SHEATHING, ATTACHED W/ IOD NAILS @ 6" O.C. ON PANEL EDGES, & @ 8" O.C. AT INTERIOR.
- 5. PT DENOTES PRESSURE TREATED IN ACCORDANCE W/ AMPA STANDARDS.
- 6. SIDING, VENTED SOFFIT, & FASCIA SHALL BE PAINTED FIBER-CEMENT BOARD, COLOR SELECTION BY OWNER.
- 7. BM-I = 5-I/2" X I6" GLULAM, 24F-V4, BALANCED, & PRESSURE TREATED.
- HEEL HEIGHT NOT CRITICAL, PER TRUSS MFR STD DETAIL -BRACING, SEE NOTES 3'-O" OUT - OUT OF BRG

TRUSS PROFILE







NOTES:

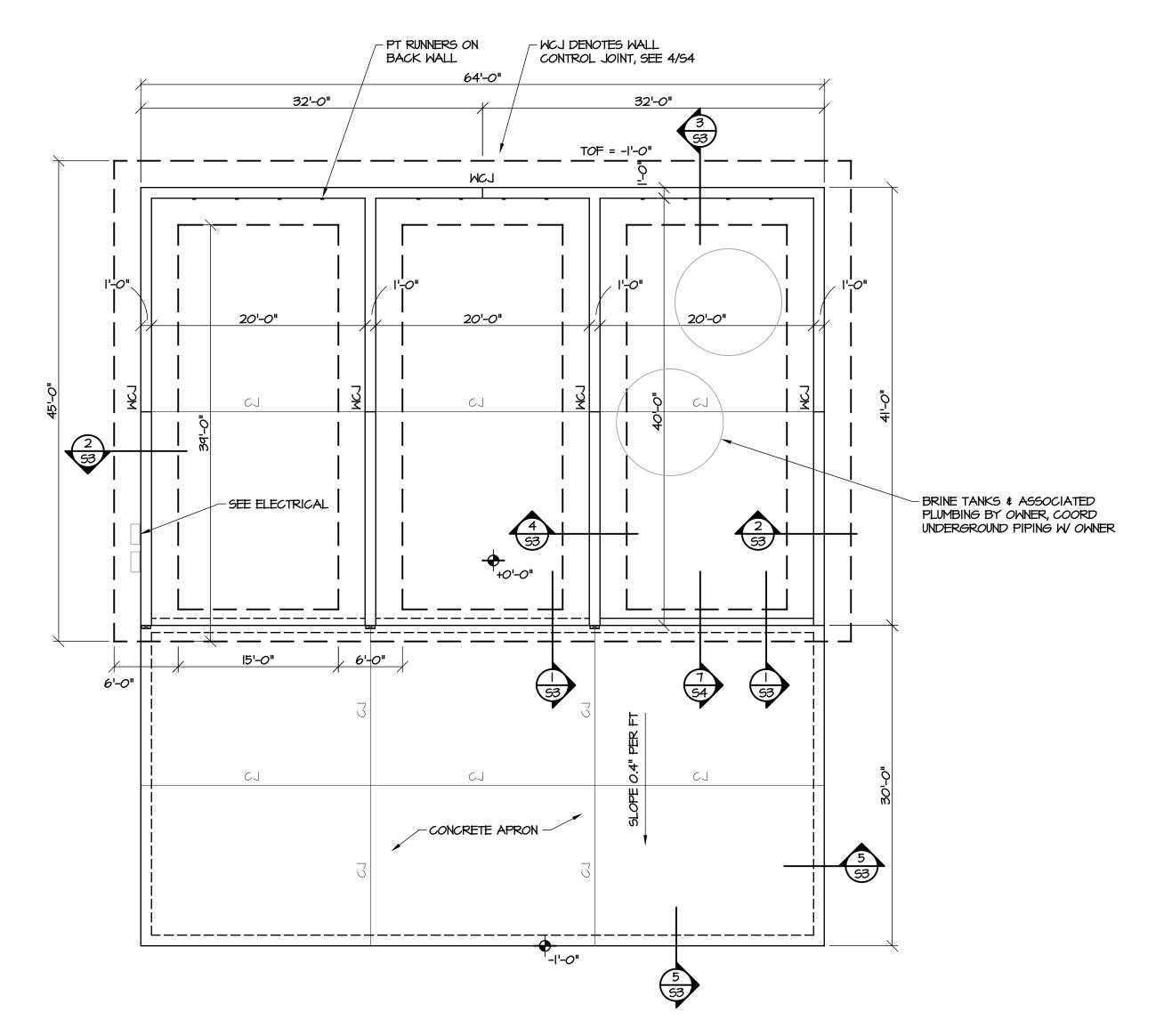
- I. COMPRESSIVE STRENGTH OF CONCRETE FOR FOOTINGS = 4000 PSI.
- 2. CONCRETE FOR WALLS & SLABS SHALL HAVE 0.40 MAXIMUM W/C RATIO, & MINIMUM 5000 PSI COMPRESSIVE STRENGTH.
- 3. EXPOSED CONCRETE SHALL INCLUDE 5% ENTRAINED AIR.
- 4. ALL REINF STEEL SHALL BE ASTM A 615, GR 60. LAP ALL SPLICES 48 X BAR DIAMETER.
- 5. ELEVATIONS SHOWN ARE ABOVE REFERENCE FLOOR ELEVATION = +0'-0".
- 6. COORDINATE LOCATION & INSTALLATION OF ELECTRICAL WORK IN BRINE BAY W OWNER.
- 7. GC ADD GROUNDING ROD TIED TO FOUNDATION REINF, SEE 6/S4, COORD LOCATION W/ OWNER.

PREPARE CONCRETE WALL SURFACES AS FOLLOWS: INTERIOR - PATCH TIE HOLES & DEFECTS, REMOVE FINS FLUSH W/ SURFACE.

EXTERIOR - PATCH TIE HOLES, BUG HOLES, & OTHER DEFECTS. REMOVE FINS FLUSH WITH SURFACE. PATCH HOLES THAT CANNOT BE SEALED W BLOCK FILLER & PAINT.

PARGE COAT MAY BE REQUIRED IF CONCRETE FINISH IS UNACCEPTABLE FOR PAINTING.

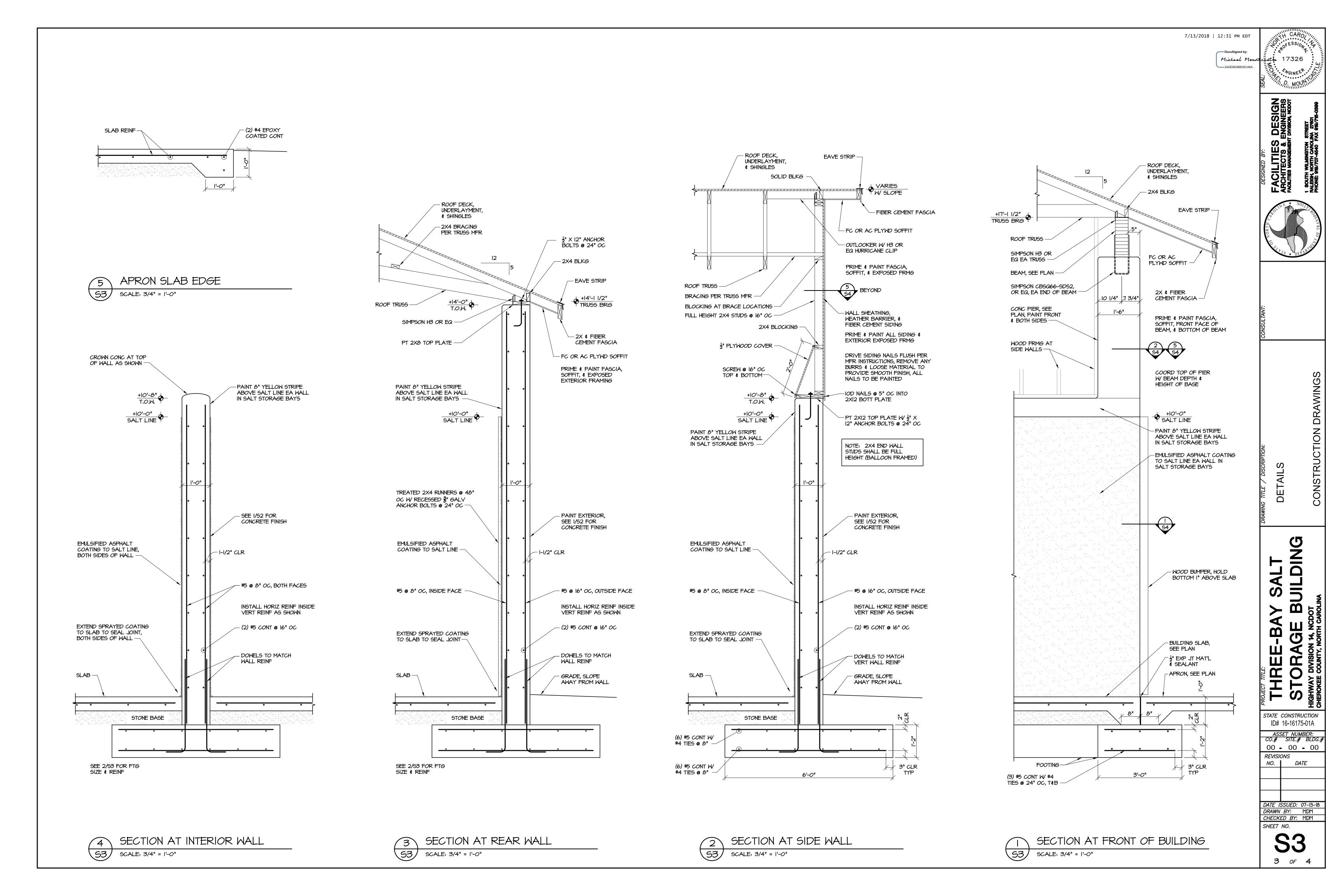
INTERIOR FLOOR & APRON SHALL BE 6" CONC SLAB REINF W EPOXY COATED #4 @ 16" OC, EW OVER 6" #57 STONE BASE.



SITE NOTES:

- I. OWNER WILL PROVIDE ROUGH GRADING UP TO THE BUILDING SUB-GRADE.
- 2. OWNER WILL PROVIDE LOCATION OF BUILDING & ORIENTATION, BUT CONTRACTOR IS RESPONSIBLE FOR BUILDING LAYOUT. AFTER LAYOUT, VERIFY BUILDING LOCATION W NCDOT PRIOR TO CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR FOOTING EXCAVATION, & MINOR GRADING AROUND OUTSIDE OF BUILDING. SOIL REMOVED DURING EXCAVATION MAY BE STORED ON SITE, COORDINATE LOCATION W/ OWNER.





A. GENERAL

- 2. Contractor is responsible for coordination & distribution of all changes in contract documents to all subcontractors.
- 3. Contractor shall verify all field conditions, elevations, & dimensions prior to construction. Do not scale from plans.
- 4. Means & methods of construction, including temporary bracing, shoring, & jobsite safety, are the responsibility of the contractor.
- 5. Structural frame shall be braced until erection is complete & permanent connections & bracing are installed.
- 6. Provide silt fence or other erosion & sediment control measures as required.
- 7. If demolition is included in project, sawcut all edges of existing slab and asphalt to remain adjacent to new construction.

B. FOUNDATION

- 1. Footing excavations shall be reviewed by a geotechnical engineer or construction testing agency approved by the architect or engineer.
- 2. Footing depths shown are based on geotechnical investigation or presumptive soil properties. Soft or unsuitable soils shall be removed & replaced with suitable fill
- 3. Under slabs & footings, remove all topsoil, trash, & organic material, & replace with select fill compacted to 95% maximum density as measured by the Standard Proctor Method (ASTM 698) in 12 inch maximum lifts. The top 12" shall be compacted to 98% maximum density.
- 4. Contractor is responsible for shoring while excavating near existing structures.

C. CONCRETE

- 1. See plans for required compressive strength of concrete.
- 2. Coordinate floor slopes and depressions with arch and plumbing plans. Maintain specified slab thickness below depressed or sloped areas.
- 3. If not specified on plans, provide sawed slab control joints in slabs on grade spaced at not more than 48 times the slab thickness.
- 4. Reinforcing steel shall meet ASTM A 615, Grade 60.
- 5. Welded wire reinforcement shall conform to ASTM A 185 & A 82.
- 6. Grout under all columns & beam bearing plates with non-shrink, non-metallic grout which meets ASTM C 1107.
- 7. Clear distance from face of concrete to main reinforcing:

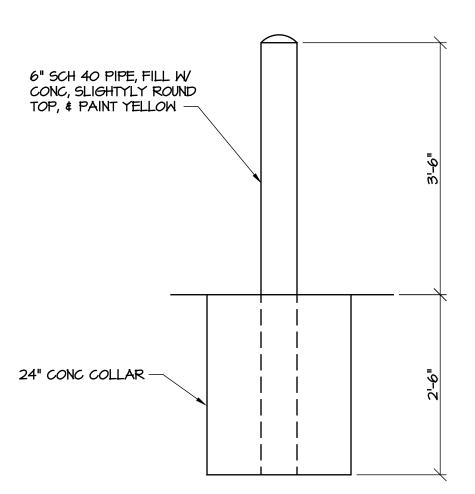
Suspended slabs and joists:

Grade beams, pedestals, columns, walls:

- Footings & walls cast against earth:
- 8. Provide (2) #4 x 48" diagonal corner bars at center of slab at all corners of
- 9. Lap all reinforcement splices 48 bar diameters, UON.
- 10. Detailing, fabrication, & installation of reinforcing steel shall conform to ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI
- 11. Workmanship, tolerances, & concrete placement shall conform to "Standard Specifications for Structural Concrete" (ACI 301).
- 12. Chamfer exposed edges of concrete 3/4", UON.
- 13. Anchor bolts shall conform to ASTM F 1554, Grade 36. Anchor bolts, nuts, & washers shall be galvanized.

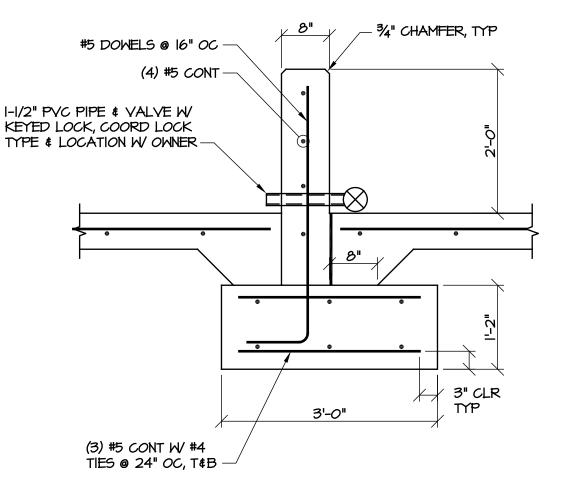
F. WOOD

- 1. Structural lumber shall be SPF #2 or better, UON. Wood for fabricated trusses shall be SYP #2 or better, except that webs may be SYP #3.
- 2. Wood in contact with concrete or masonry shall be treated.
- 3. Straps, ties, hangers, & other connection hardware shall be galvanized.
- 4. Connections not otherwise detailed shall be in accordance with Tables 2304.9.1.1
- thru 2304.9.1.6 of the NC State Building Code. 5. Trusses shall be designed for the full dead & live loads specified in the contract.
- Submit truss shop drawings bearing the seal of a registered professional engineer licensed in the state of NC. Show truss layout & truss designs including required bracing. Bracing design is the truss designer's responsibility. 6. Contractor shall install both temporary and permanent bracing. Note that permanent bracing is often shown on individual truss calculation pages instead of
- the truss layout sheet, especially where there is no hard ceiling applied to truss. 7. Additional bracing may be required by engineer of record as indicated on plans for support of gable walls or other items.
- 8. Install blocking in walls & ceiling where required for partitions, fixtures, & other misc items. Coordinate with all trades.





PAINT TOP & SIDES OF CONTAINMENT WALL



CONTAINMENT WALL SCALE: 3/4" = 1'-0"

ELECTRICAL GROUNDING ROD SCALE: 3/4" = 1'-0" CONC REAR WALL

GROUND CONNECTOR MAY BE ONE

#4 X IO' BAR TIED TO FTG REINF &

TURNED UP 12" ABOYE TOP OF FTG

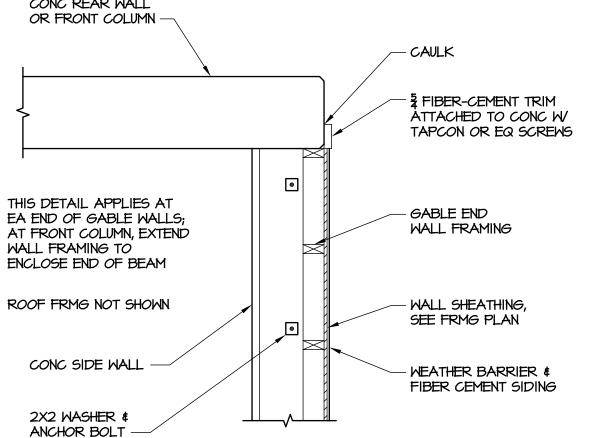
GROUND CONNECTED TO

FTG REINF, SEE ABOVE

OF THE FOLLOWING:

4 AWG BARE COPPER WIRE CLAMPED TO FTG REINF \$

EXTENDED 72" BEYOND FTG





NOTES:

CALL ELECTRICAL INSPECTOR PRIOR TO

CONCRETE PLACEMENT

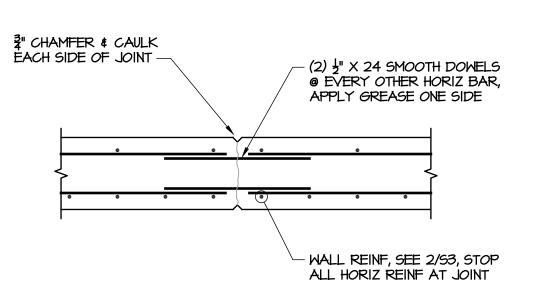
COORD LOCATION OF

GROUND ROD OR WIRE

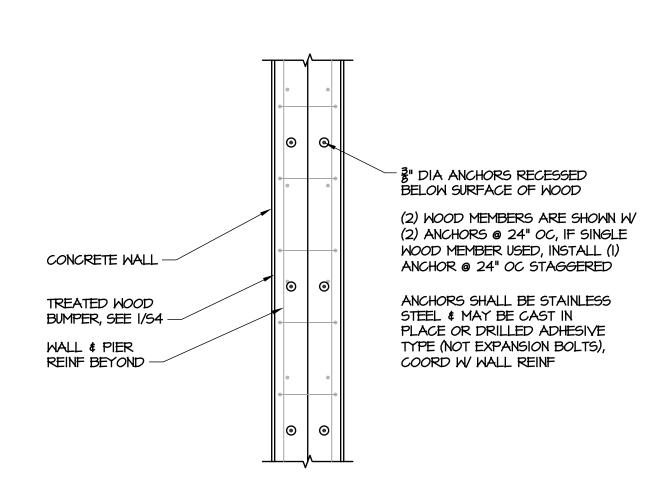
W ELECTRICAL WORK

SLAB

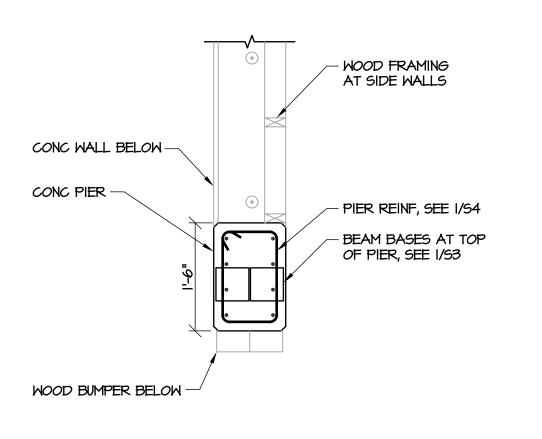
- I. CONCRETE MAY BE PLACED CONTINUOUSLY OR STOPPED TO PROVIDE COLD JOINT.
- 2. SAW CUT JOINTS INSTEAD OF CHAMFERS ARE AN ACCEPTABLE OPTION.
- 3. IF PARGING IS APPLIED TO EXTERIOR WALL, DO NOT APPLY CONTINUOUSLY ACROSS WALL CONTROL JOINTS. STOP PARGE COAT EA SIDE OF JOINT & APPLY SEALANT.



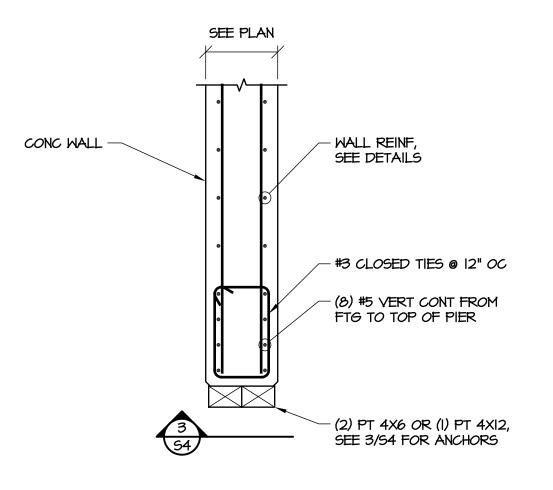
WALL CONTROL JOINT SCALE: 3/4" = 1'-0"













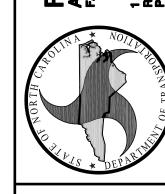
SCALE: 3/4" = 1'-0"

Michael Mounticastle NGINEER

7/13/2018 | 12:31 PM EDT

DESIGN ENGINEERS

FACILITIES
ARCHITECTS & E



UILDING RE

STATE CONSTRUCTION ID# 16-16175-01A ASSET NUMBER: CO.# SITE.# BLDG.; 00 - 00 - 00 **REVISIONS** NO. DATE

DATE ISSUED: 07-13-18 DRAWN BY: MDM

CHECKED BY: MDM SHEET NO.

4 OF 4

METHOD OF COMPLIANCE:

Energy Code: Prescriptive ___ Performance _____ ASHRAE 90.1: Prescriptive _____ Performance _____

Lightine

ing	schedule		
	lamp type required in fixture	See Fixture Schedule	
	number of lamps in fixture	See Fixture Schedule	
	•	See Fixture Schedule	<u> </u>
	* '	See Fixture Schedule	
	total wattage per fixture	See Fixture Schedule	
	total interior wattage specified vs		
	total exterior wattage specified vs	s allowed N/A	

Additional Prescriptive Compliance

506.2.1 More Efficient Mechanical Equipment

506.2.2 Reduced Lighting Power Density _____ 506.2.3 Energy Recovery Ventilation Systems _

506.2.4 Higher Efficiency Service Water Heating _____ 506.2.5 On-Site Supply of Renewable Energy _ 506.2.6 Automatic Daylighting Control Systems _____

DESIGNER STATEMENT: 1

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina State Building Code: Exergy Conservation Code 2012.

SIGNED:

<u>Dönald R. Brittain</u>

TITLE: North Carolina Professional Engineer #7883

ELE	CTRICAL LEGEND			
SYMBOL	DESCRIPTION			
	CONDUIT			
CONDUIT UNDERFLOOR OR UNDERGROUNI				
-	ARROW INDICATES HOMERUN, TICKMARKS: NEUTRAL,PHASE,GND.			
	POWER PANEL			
	EXISTING OR BY OTHERS			
	LIGHT FIXTURE			
Ф.Ф	DUPLEX RECEPT , ABOVE COUNTER			
₩P, ØGFI	WEATHERPROOF , GROUND FAULT			

LIGHTING FIXTURE SCHEDULE LAMPS TOTAL VOLTAGE REMARKS MANUFACTURER NO.1 MANUFACTURER NO.2 **MANUFACTURER NO.3** BALLAST MARK MOUNTING CATALOG NO. CATALOG NO. CATALOG NO. QTY/TYPE PROVIDE ALL HARDWARE FOR WALL MOUNT. SHALL BE GASKETED. WEATHER TIGHT 40W DMW2 LED L24 4000LM ACL WD MVOLT GZ1 40K 80CRI FIXTURE SHALL HAVE INTEGRAL LOCAL DISCONNECTING MEANS PER 4VT2 LD4 4 DR W UNV L840 WL SSL LXEM 4 40 ML RA E U NEC 410.130 (G) (2014). UNIT SHALL BE COLD RATED TO OPERATE PROPÈRLY TO -20 DEGREES FAHRENHEIT.

THIS DETAIL ILLUSTRATES THE WORKING SPACE & THE

ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER, UNDER AND IN FRONT OF THE ELECTRICAL

EQUIPMENT, CABLES, RACEWAYS, ETC. FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRIC CODE (NEC).

NOTES: FOR APPROVED EQUALS PROVIDE CUT SHEETS FOR OWNER APPROVAL PRIOR TO ORDERING FIXTURES. CATALOG NUMBERS ARE FOR REFERENCE ONLY. ACTUAL NUMBERS MAY VARY. EC SHALL VERIFY.

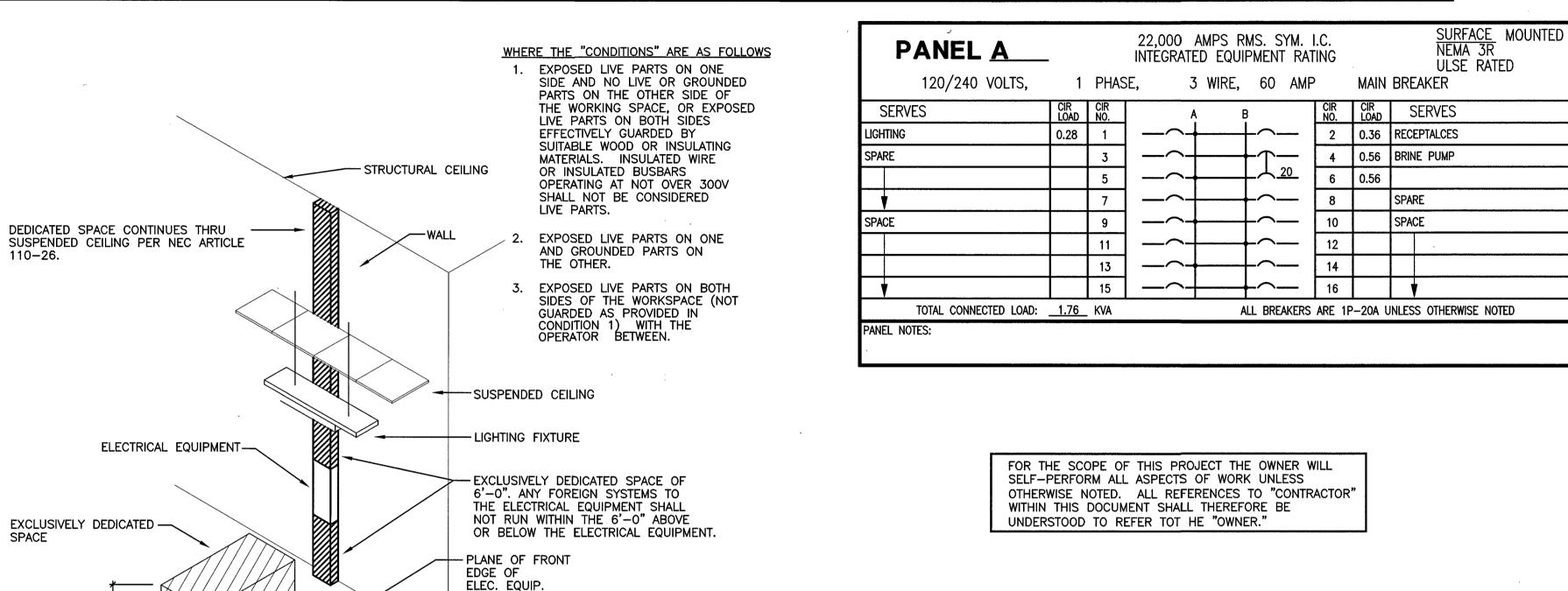
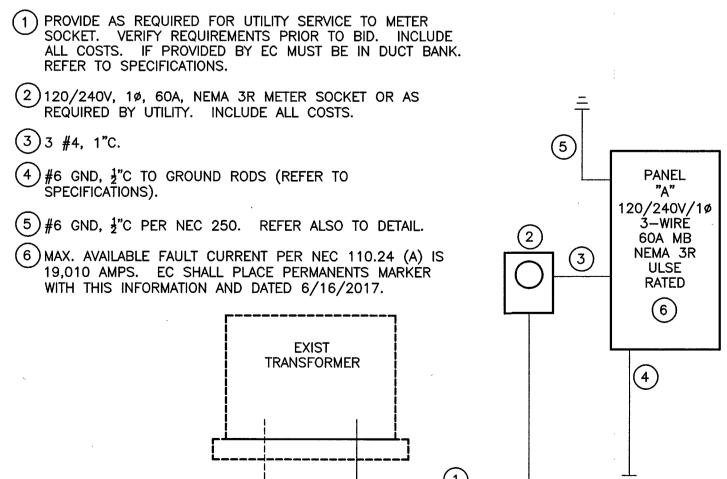


TABLE A — CLEARANCES					
VOLTAGE TO	MINIMUM	CLEAR	DISTA	NCE (FEET)	
GROUNDED NOMINAL	CONDITION:	1	2	3	
0 - 150		3	3	3	
151 - 600		3	3.5	4	

CLEARANCE FOR ELEC. EQUIPMENT

POWER RISER NOTES:

CONDUCTORS



METER SOCKET ---

NTS

PANEL "A"

FLOOR PLAN - ELECTRICAL

ALL BLDG RACEWAYS SHALL BE SCHEDULE 80 PVC W/

WEATHERPROOF CONNECTIONS. LIMIT JUNCTION BOXES

1 MOUNT FIXTURE IN CENTER OF BAY. VERIFY LOCATION W/

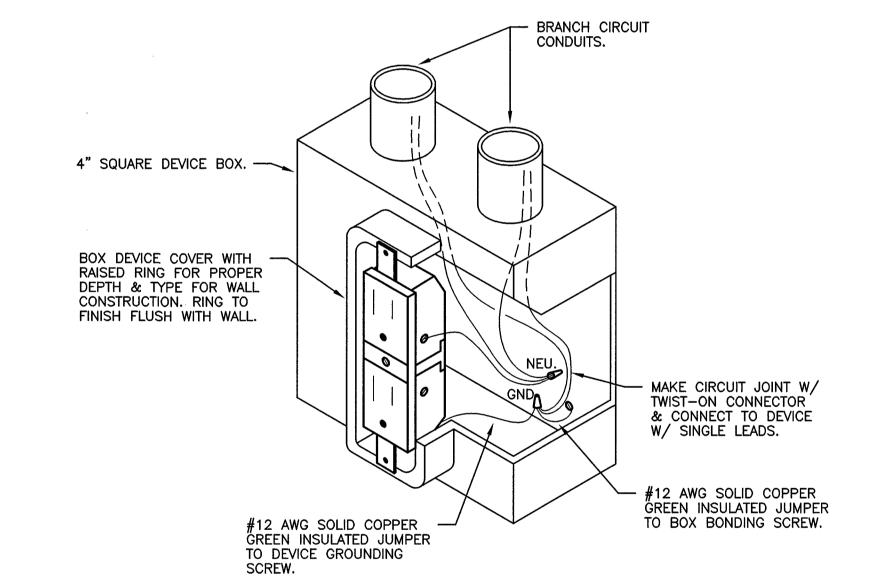
2 PROVIDE WHILE-IN-USE COVER FOR GFI/WP RECEPTACLE.

3 240/30/1/3 R, FUSE FOR BRINE PUMP. CONNECT AS

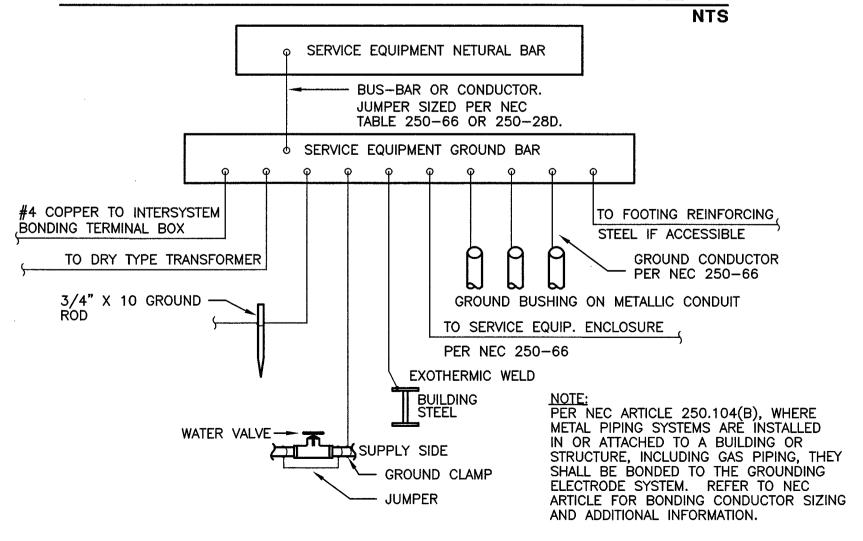
WITHIN INTERIOR OF SALT SHED. PROVIDE WATERTIGHT

INSTALLATION.

(4) 2 #10, #10 GND, $\frac{1}{2}$ °C.



RECEPTACLE GROUNDING DETAIL



SERVICE EQUIPMENT GROUNDING DETAIL

 \mathbf{m} HREE STATE CONSTRUCTION ID# 00-16175-000 ASSET NUMBER: CO.# SITE.# BLDG.# 83 - 02 - 00 REVISIONS

NO.

SHEET NO.

DATE

DATE ISSUED: 06/26/18

DRAWN BY: DGR CHECKED BY: RDG

CONSTRUCTION DOCUMENT

DESIGNEERS NOW NOW

CILITIE:

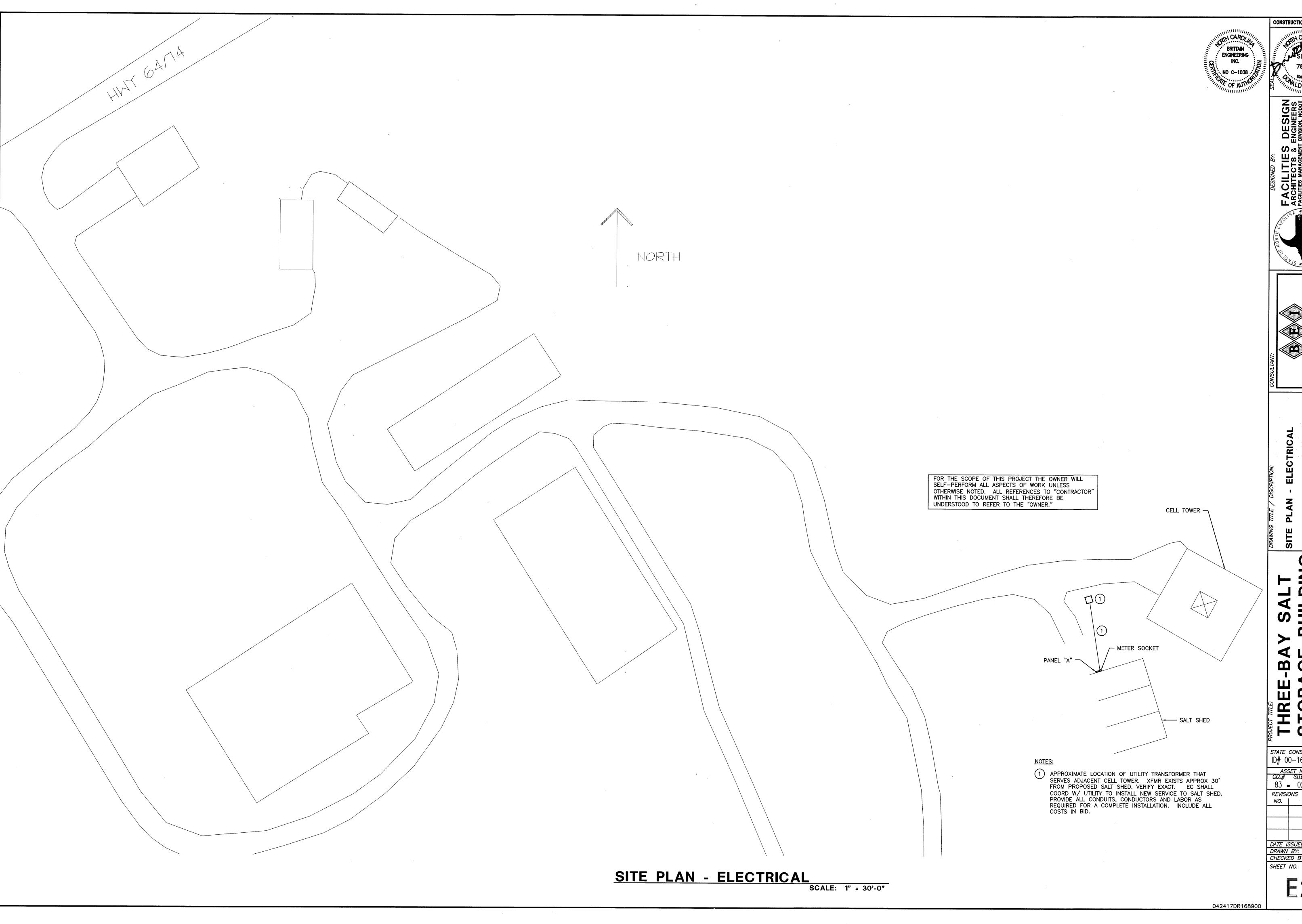
BRITTAIN

ENGINEERING

OF AUTHO

042417DR168900

POWER RISER



1 SOUTH WILMINGTON STREET RALEIGH, NORTH CAROLINA 27601 PHONE: 919/707-4540 FAX 919/715-0399



STATE CONSTRUCTION ID# 00-16175-000

ASSET NUMBER:
CO.# SITE.# BLDG.#
83 • 02 • 00 REVISIONS NO. | DATE

DATE ISSUED: 06/26/18

DRAWN BY: DGR
CHECKED BY: RDG